## REMARKS/ARGUMENTS

Applicant appreciates the Examiner's continued thorough search and examination of the present patent application.

Applicant notes with appreciation the Examiner's indication that the previous rejections to the claims are now moot in view of new grounds of rejection.

Claims 1-39 now stand rejected under 35 U.S.C. §103(a) as being unpatentable over Si et al. ("Si," *4DIS: A Temporal Framework for Unifying Meta-Data and Data Evolution*, ACM 1998, pp. 203-210)) in view of Luttermann ("Luttermann," *VRML History: Storing and Browsing Temporal 3D-Worlds*, ACM 1999, pp 153-181). Applicant respectfully traverses this rejection.

Applicant's claim 1 is directed to a system to "interactively access and analyze temporal relationships that change over time," and includes "one or more 4D portal storage mediums containing 4D portal information." The 4D portal information represents "at least three spatial dimensions and a time dimension." Further, Applicant's claim 1 includes "one or more 4D browser programs adapted to access the one or more 4D portal storage mediums and convert the 4D portal information contained therein into one or more 4D objects to be rendered in a 3D scene." The one or more 4D browser programs are further adapted to "use the 4D portal information to render and manipulate at least one of temporal and spatial manifestations of the 4D objects independent of the 3D scene." Additionally, the one or more 4D browser programs of Applicant's claim 1 are further "adapted to enable a user to simulate traveling back and forth through the time dimension of a 4D portal." Applicant's claim 1 further provides for "one or more 4D portal windows adapted to receive and display the 4D objects in the 3D scene." The cited prior art does not teach, suggest or disclose these features, either alone or in combination.

Si is cited by the Examiner for allegedly disclosing a system that comprises one or more 4D portal storage mediums containing 4D portal information representing at least three spatial dimensions and a time dimension. Applicant respectfully disagrees.

Applicant respectfully submits that Si does not teach or suggest "4D portal information" that represents "three spatial dimensions" (i.e. width, height and depth) and "time." Instead, Si teaches the evolution of meta-data which is defined in Si's information database model as

Domain(D), Mapping(M), Range(R) and Time (T). Si's D, M, and R information space is not even suggestive of applicant's "4D portal information" that includes the "three spatial dimensions."

More particularly, Si's illustrates the D, M, and R dimensions in an example comprising Employee (D), Name (M), and String (R). Applicant respectfully submits that this example demonstrates that Si teaches a factual or information database, which is patentably distinct from the applicant's "4D portal information" that includes "three spatial dimensions" which are visually represented. Indeed, in the passage cited by the Examiner Si states that "every fact in the real-world corresponds to an object in a 3DIS database," which further distinguishes Si's 3D objects (e.g., an employee(D) name(M) is John(R)) from applicant's "4D portal information." Furthermore, the 3D axes shown in figures 1,2 & 3 of Si, represent the Domain, Mapping and Range dimensions, and do not in any way represent applicant's "spatial dimensions" of width, depth and height.

Applicant respectfully submits that the teachings of Si do not teach or suggest the "4D portal information" of applicant's claim 1, nor do the teachings of Si enable one skilled in the art to reproduce applicant's "4D portal information."

The Examiner concedes that all elements of Applicant's independent claim 1 are not taught by Si. For example, the Examiner concedes Si fails to disclose, among other things, "one or more 4D browser programs adapted to access the one or more 4D portal storage mediums and convert the 4D portal information into one or more 4D objects ... rendered in a 3D scene." Accordingly, Luttermann is cited by the Examiner for supplying applicant's claim 1 one or more 4D browser programs. Applicant respectfully disagrees.

Applicant respectfully submits that Luttermann does not supply the elements of applicant's claim 1, described above, that are missing from the teachings of Si. More particularly, Luttermann does not teach or suggest "4D portal storage mediums [that contain] 4D portal information ... representing at least three spatial dimensions and a time dimension." Furthermore, Luttermann does not teach or suggest applicant's claim 1 one or more 4D browser programs.

Luttermann teaches an initial construction of a comprehensive Virtual Reality Modeling Language ("VRML") "scenegraph" that contains a temporal dimension. As taught by

Luttermann, the VRML scenegraph is provided in its entirety as an input file to a standard, prior art VRML browser application. Unlike applicant's claim 1, which defines "one or more 4D browser programs" that "convert the 4D portal information into one or more 4D objects ... rendered in a 3D scene," Luttermann teaches a VRML browser that displays a complete VRML scenegraph. Luttermann teaches that time is integrated into one temporally comprehensive VRML scenegraph used as input to a VRML browser. Applicant's "4D browser," in contrast, manipulates "4D objects independent of the 3D scene." Further, Luttermann's temporal VRML scenegraph technique, as noted by Luttermann, produces huge scenegraphs and causes spatial culling issues as well as collision-detection problems. Applicant's claim 1 "one or more 4D browsers," in contrast, "manipulate[s] 4D objects independent of a 3D scene," i.e., time is NOT integrated into the resulting 3D scenegraph and, accordingly, suffers from none of these problems.

Thus, even if one were to combine Lutttermann and Si (as the Examiner has done), applicant's claim 1 still would not be taught because the two references, either alone or in combination do not teach or suggest all of the elements of applicant's claim 1. Therefore, for the reasons set forth above, applicant respectfully submits that independent claim 1 is patentable over the combination of Si and Luttermann.

Claims 2-31 are patentable for the same reasons, and because they include features which in combination with the claim(s) from which they depend are not taught, suggested or disclosed in the prior art.

The Examiner cited the same references regarding claims 32-39, for the same reasons set forth above applicant respectfully submits that independent claim 32 is patentable over the references cited.

Claims 33-39 are patentable for the same reasons, and because they include features which in combination with the claim(s) from which they depend are not taught, suggested or disclosed in the prior art.

For the foregoing reasons, Applicant respectfully submits that the application is in condition for allowance, for which action is earnestly requested.

EXPRESS MAIL CERTIFICATE

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail to Addressee (mail label #EV343684190US) in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on February 17, 2005:

Dorothy Jenkins
Name of applicant, assignee or Registered Representative

Dorothy Jenkins
Signature

February 17, 2005
Date of Signature

DAM:JJF:ck

Respectfully submitted,

Douglas A. Miro
Registration No.: 31,643
OSTROLENK, FABER, GERB & SOFFEN, LLP
1180 Avenue of the Americas
New York, New York 10036-8403
Telephone: (212) 382-0700